

STIC Biotechnology Systems Branch

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Application Serial Number: 10/583,179
Source: 1/FwP
Date Processed by STIC: 6/27/06

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FOR CRF SUBMISSION AND PATENTIN SOFTWARE QUESTIONS, PLEASE CONTACT MARK SPENCER, TELEPHONE: 571-272-2510; FAX: 571-273-0221

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Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

- 1. EFS-Bio (<<http://www.uspto.gov/ebc/efs/downloads/documents.htm>> , EFS Submission User Manual - ePAVE)**
- 2. U.S. Postal Service: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450**
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Revised 01/10/06



IFWP

RAW SEQUENCE LISTING
PATENT APPLICATION: US/10/583,179

DATE: 06/27/2006
TIME: 12:19:05

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Output Set: N:\CRF4\06272006\J583179.raw

4 <110> APPLICANT: Agency for Science, Technology and Research
6 <120> TITLE OF INVENTION: Protein Separation Device
8 <130> FILE REFERENCE: 51571-4
C--> 10 <140> CURRENT APPLICATION NUMBER: US/10/583,179
C--> 10 <141> CURRENT FILING DATE: 2006-06-16
10 <150> PRIOR APPLICATION NUMBER: US 60/530,608
11 <151> PRIOR FILING DATE: 2003-12-19
13 <160> NUMBER OF SEQ ID NOS: 8
15 <170> SOFTWARE: PatentIn version 3.3
18 <210> SEQ ID NO: 1
19 <211> LENGTH: 1647
20 <212> TYPE: DNA
21 <213> ORGANISM: Escherichia coli
23 <220> FEATURE:
24 <221> NAME/KEY: misc_feature
25 <223> OTHER INFORMATION: GroEL wildtype DNA sequence
27 <400> SEQUENCE: 1

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30 gataaatctt tcgggtcacc gaccatcacc aaagatggta	tttccgttgc tcgtgaaatc	180
31 gaacttggaa acaagttcga aaacatgggt ggcgcagatgg	tgaaagaagt tgcctctaaa	240
32 gcgaaacgacg ctgcaggcga cggtaccacc actgcaaccg	tactggctca ggctatcatc	300
33 actgaaggta tggaaagctgt tgctgcgggc atgaacccga	tggacctgaa acgtggatc	360
34 gacaaagctg ttaccgctgc agttgaagaa ctgaaagcgc	tgtccgtacc gtgctctgac	420
35 tctaaagcga ttgctcaggt tggtaacttccgtaact ccgacgaaac	cgtaggtaaa	480
36 ctgatcgctg aagcgatgga caaagtcggta	aaagaaggcg ttatcaccgt tgaagacggt	540
37 accggctcgc aggacgaact ggacgtgggt	gaaggtatgc agttcgaccg tggctacctg	600
38 tctccctact tcatcaacaa gccggaaact ggccgcgttag	aactggaaag cccgttcatc	660
39 ctgctggctg acaagaaaaat ctccaacatc cgcaaatgc	tgccggttct ggaagccgtt	720
40 gccaaaggcag gcaaaccgct gctgatcatc gctgaagatg	tagaaggcga agcgctggca	780
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42 ttccggcgtc gtcgtaaagc tatgctgcag gatatcgaa	ccctgactgg cggtaccgta	900
43 atctctgaag agatcggtat ggagctggaa aaagcaaccc	tggaaagacct ggtcaggct	960
44 aaacgcgttg tgcgtaccaa agacaccacc accatcatcg	atggcgtggg cgaagaagct	1020
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53 cgttctgctc tgcgtacgc ggcttctgtg gctggcctga	tgatcaccac cgaatgcac	1560

pp 3-4
Does Not Comply
Corrected Diskette Needed

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 59 <211> LENGTH: 548
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 62 <213> ORGANISM: Escherichia coli
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 65 <221> NAME/KEY: misc_feature
 66 <223> OTHER INFORMATION: GroEL wildtype amino acid sequence
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 73 20 25 30
 75 Pro Lys Gly Arg Asn Val Val Leu Asp Lys Ser Phe Gly Ala Pro Thr
 76 35 40 45
 78 Ile Thr Lys Asp Gly Val Ser Val Ala Arg Glu Ile Glu Leu Glu Asp
 79 50 55 60
 81 Lys Phe Glu Asn Met Gly Ala Gln Met Val Lys Glu Val Ala Ser Lys
 82 65 70 75 80
 84 Ala Asn Asp Ala Ala Gly Asp Gly Thr Thr Ala Thr Val Leu Ala
 85 85 90 95
 87 Gln Ala Ile Ile Thr Glu Gly Leu Lys Ala Val Ala Ala Gly Met Asn
 88 100 105 110
 90 Pro Met Asp Leu Lys Arg Gly Ile Asp Lys Ala Val Thr Ala Ala Val
 91 115 120 125
 93 Glu Glu Leu Lys Ala Leu Ser Val Pro Cys Ser Asp Ser Lys Ala Ile
 94 130 135 140
 96 Ala Gln Val Gly Thr Ile Ser Ala Asn Ser Asp Glu Thr Val Gly Lys
 97 145 150 155 160
 99 Leu Ile Ala Glu Ala Met Asp Lys Val Gly Lys Glu Gly Val Ile Thr
 100 165 170 175
 102 Val Glu Asp Gly Thr Gly Leu Gln Asp Glu Leu Asp Val Val Glu Gly
 103 180 185 190
 105 Met Gln Phe Asp Arg Gly Tyr Leu Ser Pro Tyr Phe Ile Asn Lys Pro
 106 195 200 205
 108 Glu Thr Gly Ala Val Glu Leu Glu Ser Pro Phe Ile Leu Leu Ala Asp
 109 210 215 220
 111 Lys Lys Ile Ser Asn Ile Arg Glu Met Leu Pro Val Leu Glu Ala Val
 112 225 230 235 240
 114 Ala Lys Ala Gly Lys Pro Leu Leu Ile Ile Ala Glu Asp Val Glu Gly
 115 245 250 255
 117 Glu Ala Leu Ala Thr Leu Val Val Asn Thr Met Arg Gly Ile Val Lys
 118 260 265 270
 121 Val Ala Ala Val Lys Ala Pro Gly Phe Gly Asp Arg Arg Lys Ala Met
 122 275 280 285
 124 Leu Gln Asp Ile Ala Thr Leu Thr Gly Gly Thr Val Ile Ser Glu Glu
 125 290 295 300
 127 Ile Gly Met Glu Leu Glu Lys Ala Thr Leu Glu Asp Leu Gly Gln Ala

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130	Lys Arg Val Val Ile Asn Lys Asp Thr Thr Thr Ile Ile Asp Gly Val			
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133	Gly Glu Glu Ala Ala Ile Gln Gly Arg Val Ala Gln Ile Arg Gln Gln			
134	340	345	350	
136	Ile Glu Glu Ala Thr Ser Asp Tyr Asp Arg Glu Lys Leu Gln Glu Arg			
137	355	360	365	
139	Val Ala Lys Leu Ala Gly Gly Val Ala Val Ile Lys Val Gly Ala Ala			
140	370	375	380	
142	Thr Glu Val Glu Met Lys Glu Lys Lys Ala Arg Val Glu Asp Ala Leu			
143	385	390	395	400
145	His Ala Thr Arg Ala Ala Val Glu Glu Gly Val Val Ala Gly Gly Gly			
146	405	410	415	
148	Val Ala Leu Ile Arg Val Ala Ser Lys Leu Ala Asp Leu Arg Gly Gln			
149	420	425	430	
151	Asn Glu Asp Gln Asn Val Gly Ile Lys Val Ala Leu Arg Ala Met Glu			
152	435	440	445	
154	Ala Pro Leu Arg Gln Ile Val Leu Asn Cys Gly Glu Glu Pro Ser Val			
155	450	455	460	
157	Val Ala Asn Thr Val Lys Gly Gly Asp Gly Asn Tyr Gly Tyr Asn Ala			
158	465	470	475	480
160	Ala Thr Glu Glu Tyr Gly Asn Met Ile Asp Met Gly Ile Leu Asp Pro			
161	485	490	495	
163	Thr Lys Val Thr Arg Ser Ala Leu Gln Tyr Ala Ala Ser Val Ala Gly			
164	500	505	510	
166	Leu Met Ile Thr Thr Glu Cys Met Val Thr Asp Leu Pro Lys Asn Asp			
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177	<211> LENGTH: 1647			
178	<212> TYPE: DNA			
179	<213> ORGANISM: Escherichia coli			
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192	aacgtactgg cagatgcagt gaaagttacc ctcggTccGA aaggccgtaa cgtagttctg	120		
193	gataaatctt tcggTgcacc gaccatcacc aaagatggTG tttccgttgc tcgtgaaatc	180		
194	gaactggaag acaagttcga aaacatgggt ggcagatgg tgaaagaagt tgcctctaaa	240		
195	gcgaacgacg ctgcaggcga cggTaccacc actgcaaccg tactggctca ggctatcatc	300		
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199	ctgatcgctg	aagcgatgga	caaagtccgt	aaagaaggcg	ttatcaccgt	tgaagacggt	540									
200	accggctgc	aggacgaact	ggacgtgggt	gaaggtatgc	agttcgaccg	tggctacctg	600									
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206	atctctgaag	agatcggtat	ggagctggaa	aaagcaaccc	tggaagacct	gggtcaggct	960									
207	aaacgcgttg	tgatcaacaa	agacaccacc	accatcatcg	atggcgtggg	cgaagaagct	1020									
208	gcaatccagg	gccgtgttgc	tcaagatccgt	cagcagattg	aagaagcaac	ttctgactac	1080									
209	gaccgtgaaa	aactgcagga	gcgcgtagcg	aaactggcag	gcggcgttgc	agttatcaaa	1140									
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240				20			25			30						
241	Pro	Lys	Gly	Arg	Asn	Val	Val	Leu	Asp	Lys	Ser	Phe	Gly	Ala	Pro	Thr
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244	Ile	Thr	Lys	Asp	Gly	Val	Ser	Val	Ala	Arg	Glu	Ile	Glu	Leu	Glu	Asp
245				50			55			60						
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251					85			90			95					
253	Gln	Ala	Ile	Ile	Thr	Glu	Gly	Leu	Lys	Ala	Val	Ala	Ala	Gly	Met	Asn
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263	145											155				160	
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266						165				170					175		
268	Val	Glu	Asp	Gly	Thr	Gly	Leu	Gln	Asp	Glu	Leu	Asp	Val	Val	Glu	Gly	
269						180				185				190			
271	Met	Gln	Phe	Asp	Arg	Gly	Tyr	Leu	Ser	Pro	Tyr	Phe	Ile	Asn	Lys	Pro	
272						195				200			205				
274	Glu	Thr	Gly	Ala	Val	Glu	Leu	Glu	Ser	Pro	Phe	Ile	Leu	Leu	Ala	Asp	
275						210				215			220				
277	Lys	Lys	Ile	Ser	Asn	Ile	Arg	Glu	Met	Leu	Pro	Val	Leu	Glu	Ala	Val	
278	225					230				235			240				
280	Ala	Lys	Ala	Gly	Lys	Pro	Leu	Leu	Ile	Ile	Ala	Glu	Asp	Val	Glu	Gly	
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284						260				265			270				
286	Val	Ala	Ala	Val	Lys	Ala	Pro	Gly	Phe	Gly	Asp	Arg	Arg	Lys	Ala	Met	
287						275				280			285				
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290						290				295			300				
292	Ile	Gly	Met	Glu	Leu	Glu	Lys	Ala	Thr	Leu	Glu	Asp	Leu	Gly	Gln	Ala	
293	305					310				315			320				
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311						405				410			415				
313	Val	Ala	Leu	Ile	Arg	Val	Ala	Ser	Lys	Leu	Ala	Asp	Leu	Arg	Gly	Gln	
314						420				425			430				
316	Asn	Glu	Asp	Gln	Asn	Val	Gly	Ile	Lys	Val	Ala	Leu	Arg	Ala	Met	Glu	
317						435				440			445				
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VERIFICATION SUMMARY

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Input Set : F:\51571-10 Seq 08-05-06 v1.txt
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L:10 M:270 C: Current Application Number differs, Replaced Current Application No
L:10 M:271 C: Current Filing Date differs, Replaced Current Filing Date